

November 18, 2015

Tom Moe  
USS Corporation  
P.O. Box 417  
Mountain Iron, MN 55768

RE: Project: NPDES Data Gaps  
Pace Project No.: 1256789

Dear Tom Moe:

Enclosed are the analytical results for sample(s) received by the laboratory on November 06, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Heather R Zika  
heather.zika@pacelabs.com  
Project Manager

Enclosures

cc: Terri Sabetti, Northeast Technical



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## CERTIFICATIONS

Project: NPDES Data Gaps

Pace Project No.: 1256789

---

### Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792

Alaska Certification #MN01084

Arizona Department of Health Certification #AZ0785

Minnesota Dept of Health Certification #: 027-137-445

North Dakota Certification: # R-203

Wisconsin DNR Certification # : 998027470

WA Department of Ecology Lab ID# C1007

Nevada DNR #MN010842015-1

Oklahoma Department of Environmental Quality

---

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## SAMPLE SUMMARY

Project: NPDES Data Gaps

Pace Project No.: 1256789

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1256789001	SW001 Station 701	Water	11/06/15 09:20	11/06/15 09:50

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## SAMPLE ANALYTE COUNT

Project: NPDES Data Gaps

Pace Project No.: 1256789

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
1256789001	SW001 Station 701	EPA 200.7	MAR	2	PASI-V
		SM 2320B	CSD	1	PASI-V
		EPA 300.0	DMB	2	PASI-V

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## ANALYTICAL RESULTS

Project: NPDES Data Gaps

Pace Project No.: 1256789

Sample: SW001 Station 701		Lab ID: 1256789001		Collected: 11/06/15 09:20		Received: 11/06/15 09:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 MET ICP</b>									
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Calcium	<b>32.0</b>	mg/L	2.0	0.12	4	11/09/15 15:05	11/10/15 14:33	7440-70-2	
Magnesium	<b>40.4</b>	mg/L	2.0	0.27	4	11/09/15 15:05	11/10/15 14:33	7439-95-4	
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B									
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	<b>89.5</b>	mg/L	5.0	0.48	1		11/13/15 13:23		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Chloride	<b>44.1</b>	mg/L	5.0	2.5	5		11/12/15 01:26	16887-00-6	
Sulfate	<b>124</b>	mg/L	10.0	0.44	5		11/12/15 01:26	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## QUALITY CONTROL DATA

Project: NPDES Data Gaps

Pace Project No.: 1256789

QC Batch: MPRP/6144

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 MET

Associated Lab Samples: 1256789001

METHOD BLANK: 266633

Matrix: Water

Associated Lab Samples: 1256789001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	0.50	0.029	11/10/15 13:39	
Magnesium	mg/L	ND	0.50	0.067	11/10/15 13:39	

LABORATORY CONTROL SAMPLE: 266634

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	50	50.9	102	85-115	
Magnesium	mg/L	50	50.3	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 266635

266636

Parameter	Units	1256733001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	7.5	50	50	59.0	58.5	103	102	70-130	1	20	
Magnesium	mg/L	2.4	50	50	53.0	52.1	101	99	70-130	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 266637

266638

Parameter	Units	1256789001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	32.0	50	50	85.0	86.1	106	108	70-130	1	20	
Magnesium	mg/L	40.4	50	50	93.3	92.0	106	103	70-130	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## QUALITY CONTROL DATA

Project: NPDES Data Gaps

Pace Project No.: 1256789

QC Batch: WET/21338

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Associated Lab Samples: 1256789001

METHOD BLANK: 268165

Matrix: Water

Associated Lab Samples: 1256789001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	0.48	11/13/15 12:14	

SAMPLE DUPLICATE: 268167

Parameter	Units	1256712001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	790	795	1	20	

SAMPLE DUPLICATE: 268168

Parameter	Units	1256794001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	324	332	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## QUALITY CONTROL DATA

Project: NPDES Data Gaps

Pace Project No.: 1256789

QC Batch: WETA/14649

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 1256789001

METHOD BLANK: 267381

Matrix: Water

Associated Lab Samples: 1256789001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	11/11/15 18:13	
Sulfate	mg/L	ND	2.0	0.089	11/11/15 18:13	

LABORATORY CONTROL SAMPLE: 267382

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.5	103	90-110	
Sulfate	mg/L	50	52.2	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 267383

267384

Parameter	Units	1256802001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	75.6	500	500	604	604	106	106	90-110	0	20	
Sulfate	mg/L	616	500	500	1150	1160	108	108	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 267385

267386

Parameter	Units	1256745002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	40.2	50	50	91.8	91.8	103	103	90-110	0	20	
Sulfate	mg/L	87.0	50	50	139	139	104	104	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



## QUALIFIERS

Project: NPDES Data Gaps

Pace Project No.: 1256789

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-V Pace Analytical Services - Virginia

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPDES Data Gaps

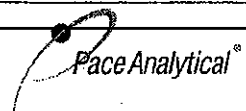
Pace Project No.: 1256789

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1256789001	SW001 Station 701	EPA 200.7	MPRP/6144	EPA 200.7	ICP/4742
1256789001	SW001 Station 701	SM 2320B	WET/21338		
1256789001	SW001 Station 701	EPA 300.0	WETA/14649		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



	Document Name:	Document Revised: 23Feb2015
	Sample Condition Upon Receipt Form	Page 1 of 1
	Document No.: F-VM-C-001-Rev.09	Issuing Authority: Pace Virginia, Minnesota Quality Office

Sample Condition Upon Receipt

Client Name:

USS

Project #:

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client  
☐ Commercial ☐ Pace ☐ Other:

WO#: 1256789



Tracking Number:

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No

Seals Intact? ☐ Yes

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other:

Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808

Type of Ice: ☒ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.2

Cooler Temp Corrected °C: 0.5

Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C

Correction Factor: 0.3

Date and Initials of Person Examining Contents: 11-6-15 CR

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>		
All containers needing acid/base preservation will be checked and documented in the pH logbook.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	See pH log for results and additional preservation documentation
Headspace in Methyl Mercury Container	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted:

Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N

TEMPERATURE WAIVER ON FILE Y N

Project Manager Review:

Heffler 30

Date:

11/9/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)